

STUDIES IN THE HELIANTHEAE (ASTERACEAE). XXVIII.

ADDITIONS TO CALEA AND ICHTHYOTHERE FROM BRASIL.

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In the last few years, a number of species have been described from Brasil in the genera *Calea* (Robinson, 1979a,b, 1980b, Santos, 1980) and *Ichthyothere* (Robinson, 1980a). Nevertheless, recent collections contain material of a further undescribed species in each of these genera.

CALEA BISHOPII H.Robinson, sp. nov.

Plantae herbaceae erectae ad 0.5 m altae mediocriter ramosae in caulis foliis et involucris glabrae. Caules atro-brunnescentes teretes subtiliter costati. Folia opposita filiformia 2-3 cm longa et ca. 0.5 mm lata sessilia integra. Inflorescentiae in ramis terminales in pedunculis elongatis unicapitatae. Capitula heterogama; involucra campanulata ca. 8 mm alta et 6-7 mm lata; squamae involucri ca. 10 subimbricatae ca. 3-seriatae inaequales rufo-brunnescentes oblongae 3-7 mm longae et 2.0-2.5 mm lata apice rotundatae margine minute puberulo-fimbriatae extus multo striatae. Flores radii 5-6; corollae flavae glabrae, tubis ca. 2 mm longae, limbis ca. 7 mm longae et 3 mm latae. Flores disci ca. 7-8; corollae sordido-flavae ca. 5 mm longae glabrae, tubis ca. 1.2 mm longis, faucibus anguste campanulatis ca. 2.2 mm longis, lobis oblongo-triangularibus ca. 1.2 mm longis et base 0.8 mm latis; filamenta in parte superiore ca. 0.3 mm longa; thecae ca. 2 mm longae; appendices antherarum ovatae ca. 0.3 mm longae et latae; basi stylorum leniter noduliferi, rami stylorum senecioniformes. Achaenia prismatica ca. 3.3 mm longa base breviter angustiora superne setulifera, setis recte biseriatis; squamae pappi ca. 9 lanceolatae 3.0-3.5 mm longae extus plerumque laeves. Grana pollinis in diametro ca. 33-35 μ m.

TYPE: BRASIL: Minas Gerais: 10 km S of Diamantina from road to 8 km W. Elev. 3600-4000 feet. Flowers yellow, rare in pasture. Jan. 18, 1981. King & Bishop 8551 (Holotype, UB; isotype, US).

The new species seems most closely related to *Calea kirkbridei* H.Robins. also of Minas Gerais, but the latter has broader linear leaves, scabrid peduncles, and heads with more numerous parts, up to 15 involucral bracts, ca. 8 ray flowers and ca. 20 disk flowers (Robinson, 1979a).

Calea heringeri is the correct spelling the species recently described with an extra "l" in Phytologia 47 (3): 261. 1980.

ICHTHYOTHERE DAVIDSEI H. Robinson, sp. nov.

Plantae herbaceae erectae ca. 0.8 m altae mediocriter ramosae. Caules sordidovirides subteretes striati pilosi. Folia opposita elliptica plerumque 5-14 cm longa et 1.5-5.0 cm lata base et apice acuminata base subpetioliformia margine integra vel subintegra utrinque plerumque in nervis et marginis pilosa subtus leniter pallidiora glandulo-punctata supra basem valde trinervata, nervis secundariis valde ascendentibus ad marginem subparallelis. Inflorescentiae in ramis terminales in glomerulis pauci-capitatis aggregatae foliatae. Capitula sessilia vel subsessilia 5-8 mm alta et 4-5 mm lata; squamae exteriores femineae ca. 2 in capitulo late ellipticae vel orbicularis 4-5 mm longae et ca. 3 mm latae extus pilosae subtiliter multi-costatae; squamae interiores masculi (paleae) ca. 30 oblongae ca. 3 mm longae et 2 mm latae late bicostatae. Corollae femineae tubiformes ca. 1 mm longae minute 5-lobatae supra medio puberuli, pilis biseriatis glanduliferis et non glanduliferis, glandulis non incrassatis. Corollae masculae albae infundibulares ca. 3 mm longae, faucibus in nervis mediocriter incrassatis, lobis triangularibus ca. 0.6 mm longis et 0.5 mm latis superne glandulo-punctatis; filamenta in parte superiore ca. 0.25 mm longa; thecae ca. 1 mm longae; appendices antherarum ca. 0.15 mm longae et 0.12 mm latae extus pauce glanduliferae. Achaenia feminea obprismatica ca. 4 mm longa subtiliter 4-angulata laevia vel extus pustulata. Grana pollinis in diametro ca. 25 μ m.

TYPE: BRASIL: Pará: Município conceição do Araguaia. Range of low hills ca. 20 km west of Redenção, near Córrego São João and Troncamento Santa Teresa. Approx. $8^{\circ}03' S.$, $50^{\circ}10' W.$ Alt. 350-620 m. Erect herb on open rock outcrop on steep hillside. Florets white. T. Plowman, G. Davidse, N.A. Rosa, C.S. Rosario & M.R. dos Santos 8577 (Holotype, MG; Isotypes, NY, US). PARATYPE: BRASIL: Pará: Município Conceição do Araguaia. Range of low hills ca. 20 km west of Redenção, near Córrego São João and Troncamento Santa Teresa. Approx. $8^{\circ}03' S.$, $50^{\circ}10' W.$ alt. 350-620 m. Herb 0.8 m tall in moist crack in exposed rock outcrop on mountain top. Florets white. Plowman, Davidse et al. 8795 (NY).

The new species seems closest to *Ichthyothere petiolata* H. Robins. from Rondônia in Brasil. The latter, however, is more distinctly petiolate, has serrulate leaf margins, has only one female flower per head, and has only a few large subsessile glands at the apex of the corolla of the female flower. In the new species the corolla of the female flower has many long hairs in the upper half with the cells biserrate. The hairs are either with or without glandular tips, and the gland tip, when present, is not enlarged.

Literature Cited

Robinson, H. 1979a. Studies in the Heliantheae (Asteraceae).

XIX. Four new species of *Calea* from Brasil. *Phytologia* 44 (4): 270-279.

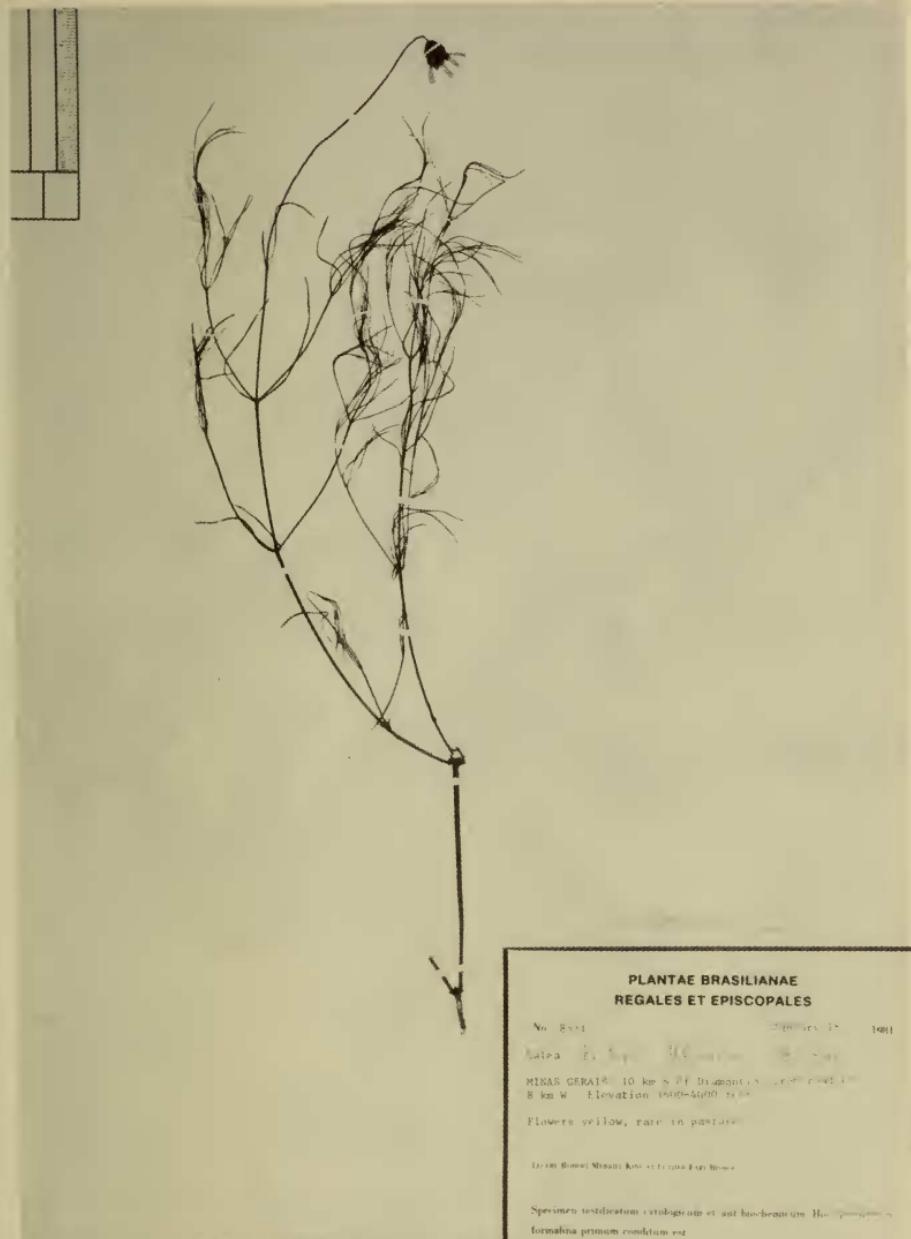
Robinson, H. 1979b. Studies in the Heliantheae (Asteraceae).

XXII. Two new species of *Calea* from Brasil. *Phytologia* 44 (7): 436-441.

_____. 1980a. Studies in the Heliantheae (Asteraceae). XXVI. New species of *Ichthyothere*. *Phytologia* 47 (2): 128-134.

_____. 1980b. Studies in the Heliantheae (Asteraceae). XXVII. A new species of *Calea* from Brasil. *Phytologia* 47 (3): 261-264.

Santos, Joao Ubiratan Moreira dos 1980. *Calea grazielae* J. U. Santos uma nova especie de *Compositae* para Minas Gerais. *Bradea* 3 (16): 119-122.



Calea bishopii H. Robinson, Holotype, Herbário Universidade de Brasília. Photos by Victor E. Krantz, Staff Photographer, National Museum of Natural History.

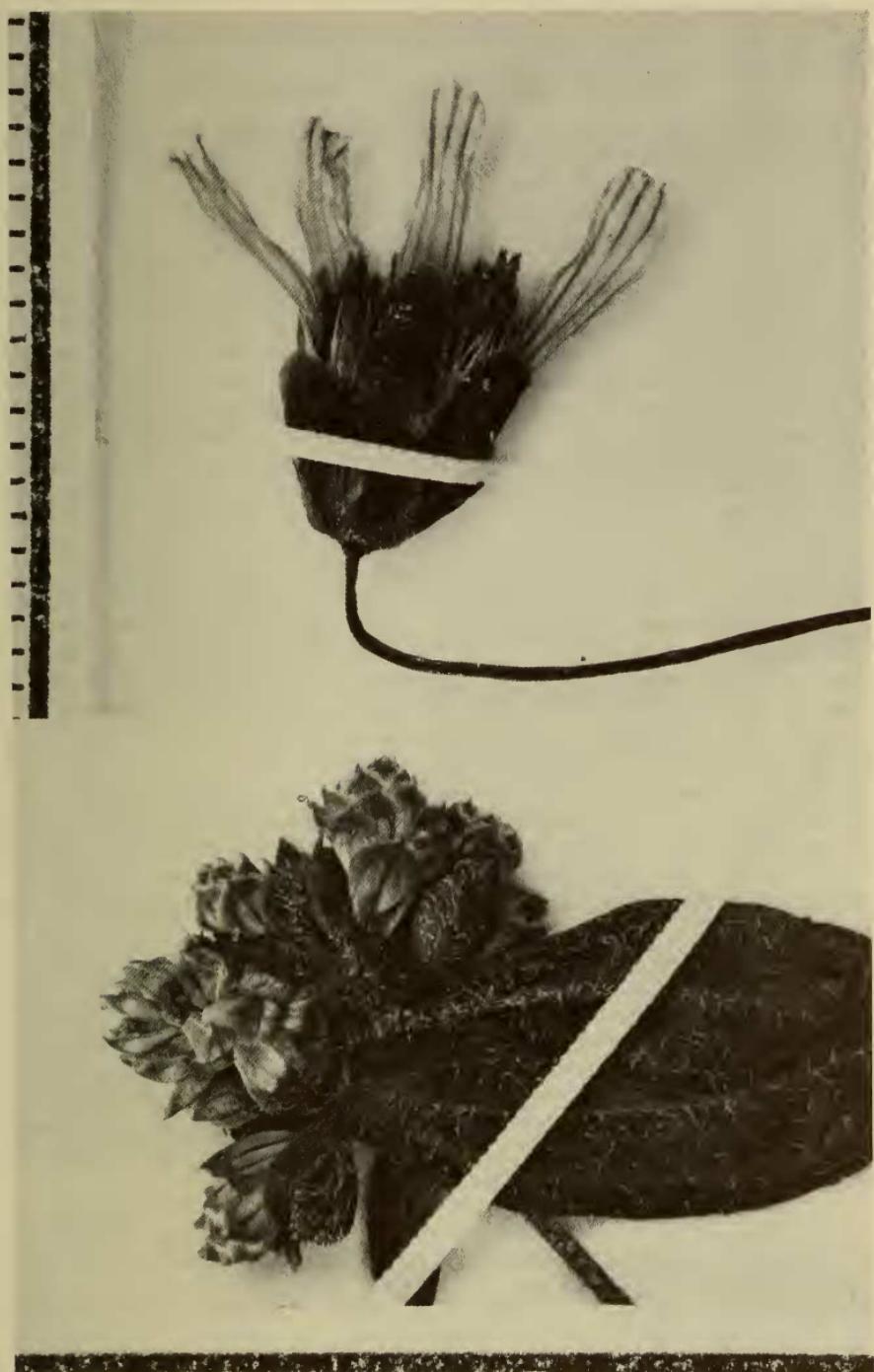


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Ichthyothere davidsei H. Robinson, Isotype, United States
National Herbarium.



Enlargements of heads. Top: *Calea bishopii*. Bottom:
Ichthyothere davidsei.